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PATENT  
ATTORNEY DOCKET NO.: 024607-5002

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<i>In re</i> Application of:	)	
	)	
Shinji YOKO et al.	)	Confirmation No.: 9086
	)	
Application No.: 09/871,697	)	Group Art Unit: 3623
	)	
Filed: June 4, 2001	)	Examiner: Andre D. Boyce
	)	
For: MULTI-DIMENSIONAL	)	
MANAGEMENT METHOD	)	
AND SYSTEM	)	

**DECLARATION UNDER 37 C.F.R. 1.131**

I, Shinji Yoko declare as follows:

1. I am a named co-inventor of the above-referenced U.S. Patent Application (Application 09/871,697), and am the sole inventor of claims 1-27 and 30-33.
2. On or about October 11, 1999 I submitted a draft of a Master's Thesis titled "Multi-Dimensional Matrix Management System" to my thesis advisor, Shyam J. Kamath, Ph.D., for the Executive MBA Program at IMADEC-CSUH University in Vienna. This thesis encompassed my conception of the invention, which occurred before October 11, 1999, and is disclosed in claims 1-27 and 30-33 of U.S. Patent Application No. 09/871,697. A true and correct copy of the October 11, 1999 draft thesis was enclosed with the Declaration filed on July 31, 2006.
3. After October 11, 1999 I continued working diligently on the invention. Attached as Exhibit 1 to this Declaration is a project plan document representing project plan and cost of the Multi-Dimensional Matrix Management System from July 1999 through December 1999 (referenced as MMM MOPS). I managed the work of this team, and the work was kept confidential within TDK.

4. During this time I continued work on my thesis. An email dated March 2, 2000 from me to Yasuaki Fukuoka is attached as Exhibit 2. In that email I forward portions of my thesis for review and comment. The attachment to the email is included as Exhibit 3. The content of Exhibit 3 is almost the same as page 1-3,15 in the Master's Thesis and the some of the contents of provisional application (No.60/208,922).

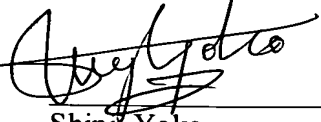
5. After sending the email, I continued working on my invention. On May 17, 2000, I contacted Ms. Mary Jane Boswell and asked her to file a provisional patent application for my invention. The email is attached as Exhibit 4.

6. From May 17, 2000 I remained in contact with Ms. Boswell as she prepared the application and continued diligently working on the thesis and invention. The provisional patent application for my invention (60/208,922) was filed on June 5, 2000. A copy of the billing statements detailing her work on the application is attached as Exhibit 5.

7. The subject matter of claims 1-27 and 30-33 was therefore invented prior to the priority date of U.S. Patent No. 6,895,403 to *Cardwell et al.* (March 31, 2000).

8. I further declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.

Respectfully submitted,

  
\_\_\_\_\_  
Shinji Yoko

Mar 6, 2007  
\_\_\_\_\_  
Date

## Project Plan for Lotus Notes Development at TDK

July 1 - December 31, 1991

## Carryover Applications from Previous Development Period

Application	Owner	Priority	Current Status	Estimated Start Date	Estimated End Date	Estimated Hrs Needed	Estimated Resources
MS Project Tracking	MIS	Critical	Work In Progress	04/05/89	07/08/89	160	2 developer(s)
Travel Reservations	Accounting	High	User Acceptance Testing	05/20/89	07/30/89	400	2 developer(s)
Price Approval (Enhancements)	Corporate Planning	High	Work In Progress	04/28/89	08/31/89	1,080	3 developer(s)
Distribution Costing	Distribution	High	Work In Progress	04/28/89	08/31/89	1,080	3 developer(s)
Performance Appraisals	Human Resources	Low	User Acceptance Testing	12/04/88	07/18/89	120	1 developer(s)
Total Hrs:						2,840	

## New Applications for Upcoming Development Period

Application	Owner	Priority	Current Status	Estimated Start Date	Estimated End Date	Estimated Hrs Needed	Estimated Resources
MSM MOPS	Corporate Planning	Critical	In Queue, Gathering Requirements	07/01/89	12/10/89	5,000	5 developer(s)
MOPS Phase II	Corporate Planning	Critical	In Queue, Gathering Requirements	07/01/89	12/10/89	3,000	3 developer(s)
Marketing Database	Marketing	High	In Queue, No Specs Yet	08/01/89	11/30/89	2,040	3 developer(s)
Emergency Delivery Redesign	Material Control Mgmt	High	In Queue, No Specs Yet	07/18/89	09/30/89	1,200	3 developer(s)
Lotus Notes R3 Testing & Migration	MIS	High	In Queue, Awaiting Other Processes	07/18/89	08/31/89	840	3 developer(s)
IBM R/PQ	Sales	Medium	In Queue, No Specs Yet	10/01/89	12/31/89	1,080	3 developer(s)
Exempt Employee Time-Off Approval	Human Resources	Low	In Queue, No Specs Yet	08/01/89	09/30/89	250	1 developer(s)
Benefits Information & Forms	Human Resources	Low	In Queue, No Specs Yet	08/01/89	10/31/89	480	1 developer(s)
Time & Attendance	Human Resources	Low	In Queue, No Specs Yet	09/01/89	12/31/89	680	1 developer(s)
Corporate Internal	Corporate Planning	Unknown	Concept Request, No Specs Yet	08/01/89	03/31/90	5,100	5 developer(s)
Total Hrs:						19,670	
Grand Total:						22,510	
Total Resources:						8 developers	

## Notes:

- a) Hour and resource allocations have been estimated based on current understanding of business needs  
 b) Hour and resource estimates do not include project management

Evidence-D

# ESTIMATED RESOURCE COST FOR THE DEVELOPMENT OF MMM MOPS AND THE REWORK OF OS MOPS

Option A		Option B:	
Structured Project Management Lead by Lotus Notes Team		Skip Phase 2 and 3 -- go direct to Phase four.	
Phase 1: Project Definition	Complete	Phase 1: Project Definition	Complete
Phase 2: Specification and Technical Evaluation			
Time Frame: Aug 1 - (Sept 15) *overlap			
2 Dev x \$180 x 8 hrs x (30 days)	76,800.00		
Phase 3: Project Design			
Time Frame: Sept 1 - (Oct 15) *overlap			
3 Dev x \$130 (\$ Ave.) x 8 hrs x (30 days)	93,600.00		
Phase 4: Project Development			
Time Frame: Sept 15 - Dec 1			
7 Dev x \$130 (\$ Ave.) x 8 hrs x (55 days)	400,400.00		
Phase 5: Project Deployment			
Time Frame: Dec 1 - Jan 1			
2 Dev x \$130 (\$ Ave.) x 8 hrs x (1 mo. @ 20 days)	41,600.00		
Phase 6: Project Deployment			
Time Frame: Jan 00 - Apr 00			
5 Dev x \$130 (\$ Ave.) x 8 hrs x (4 mo. @ 20 days)	416,000.00		
Total estimated cost Option A	\$612,400.00	Total estimated cost Option B	\$1,248,000.00
Assumptions:		Assumptions:	
Lotus Notes Team will lead project		Development will adhere to historical methodology.	
Business Rules, Workflow and VOCABULARY will be determined in phase 2.		Immediate database required.	
Does not include any (if at all) travel costs		Re-work will consume in excess of 50% original cost during deployment.	
All Developers will be dedicated to this project. No conflicting assignments will be made by TCA		Does not include any (if at all) travel costs	
TCA/TDK will make resources available for beta and pilot testing (User group and facilities) to assure Jan 1 goal is met.		All Developers will be dedicated to this project. No conflicting assignments will be made by TCA	

Break out of project percentage and shared cost between TCA, TCE and TDK-JP					
GLOBAL PROJECT NAME	% Resource Allocation	OPTION A		OPTION B	
		Total	Shared	Total	Shared
OS MOPS Redesign and Integration to MMM MOPS	40%	244,960.00	81,653.00	489,200.00	188,400.00
MMM MOPS Creation (New Application)	60%	367,440.00	122,480.00	748,800.00	249,600.00

THIS ESTIMATE DOES NOT INCLUDE TCA SPECIFIC PROJECTS.

## The Management Association of Illinois

## 303.055 PROGRAMMER: GRADE 7

Develop and modify a variety of computer programs which are less complex in nature for a small to medium size system to meet the specific needs of company departments. Assist in phases of programming projects and modifying purchased software as assigned. Analyze requirements for business, statistical, technical, mathematical, or scientific problems, where standard practices apply. Write, detail, and code program instructions. Prepare flow charts and other documentation. Test and debug programs, and correct program errors. Resolve software and hardware problems for computer operators.

			Base Pay				Cash				
	Number of Companies	Number of Employees	Average	Interquartile Ranges			Extremes		Number of Companies	Average	
				Weighted Average	25th	Median	75th	10th			90th
Total Responses	26	36	\$41,368	\$43,261	\$33,693	\$39,014	\$47,601	\$29,806	\$59,069	4	\$6,720
Company Size											
31 - 100	5	6	\$42,420	\$41,818	\$33,310	\$38,812	\$51,333	\$0	\$0	0	\$0
101 - 200	6	6	\$36,430	\$36,430	\$29,838	\$33,902	\$44,503	\$0	\$0	0	\$0
201 - 400	8	11	\$39,686	\$43,368	\$34,230	\$34,998	\$50,431	\$0	\$0	2	\$0
Over 400	6	11	\$43,707	\$43,694	\$35,043	\$41,330	\$54,993	\$0	\$0	2	\$0
Geographic Area											
Chicago	5	7	\$38,782	\$42,644	\$27,157	\$34,996	\$52,999	\$0	\$0	0	\$0
Northwest Indiana	14	21	\$41,228	\$45,009	\$34,443	\$41,376	\$54,101	\$31,000	\$59,337	2	\$0
West Suburbs	4	5	\$43,128	\$41,944	\$0	\$38,909	\$0	\$0	\$0	1	\$0
Industry Type											
MFO Durables	12	15	\$43,169	\$44,940	\$33,079	\$40,030	\$56,490	\$30,547	\$59,603	2	\$0
MFO Non-Durables	5	8	\$40,211	\$49,903	\$38,319	\$45,000	\$59,638	\$0	\$0	0	\$0
Wholesale/Retail/Trade/Other	4	4	\$31,038	\$31,038	\$0	\$30,746	\$0	\$0	\$0	1	\$0
Other	4	8	\$38,368	\$40,049	\$0	\$37,612	\$0	\$0	\$0	1	\$0

## The Management Association of Illinois

## 303.054 PROGRAMMER: GRADE 8

Develop a wide variety of complex computer programs for a medium to large size system to meet the specific needs of company departments. Analyze requirements for complex business, statistical, technical, mathematical, and scientific problems. Write, detail, and code program instructions. Prepare flow charts and other documentation. Test and debug programs. Correct program errors by modifying instructions and sequences. Evaluate and resolve software and hardware problems for computer operators.

	Number of Companies	Number of Employees	Base Pay				Cash			
			Interquartile Ranges			Weighted Average	Extremes			Variable Pay
			25th	Median	75th		10th	90th	Number of Companies	
Total Respondent	20	32	\$40,345	\$46,000	\$52,886	\$52,905	\$36,946	\$73,283	4	\$1,723
Company Size										
101 - 200	4	8	\$32,316	\$47,690	\$67,690	\$49,724	\$30,730	\$80,283	1	\$0
201 - 400	10	13	\$37,915	\$46,976	\$57,239	\$49,724	\$36,946	\$73,283	0	\$0
Over 400	6	11	\$43,363	\$45,600	\$48,129	\$45,911	\$30,730	\$80,283	3	\$2,266
Geographic Area										
Chicago	3	3	\$31,980	\$42,880	\$61,639	\$31,980	\$30,730	\$80,283	1	\$0
North Suburbs	3	3	\$37,346	\$43,000	\$50,000	\$37,346	\$30,730	\$80,283	0	\$0
Northwest Suburbs	8	19	\$37,829	\$48,483	\$68,770	\$37,726	\$30,730	\$80,283	0	\$0
West Suburbs	3	4	\$43,637	\$45,000	\$50,000	\$45,478	\$30,730	\$80,283	2	\$0
Industry Type										
MFG Durable	13	20	\$48,476	\$39,590	\$52,218	\$48,165	\$33,496	\$71,615	2	\$0
Wholesale/Retail Trade/Other	4	3	\$46,640	\$50,000	\$50,000	\$46,472	\$30,730	\$80,283	1	\$0

## Programmer Analyst

Plan, develop, test and document computer software programs. Evaluate user requests for new or modified programs to determine feasibility, cost and time required and compatibility with current system. Formulate plan outline steps required to develop the program and submit plan for approval; upon approval develop program considering language, graphics, terminal display screen and printer capability.

City Name	# of Org.	# of Emp.	Wtd. Avg.	Median	Mid 50% Range
Los Angeles, CA	15	121	48959	46896	
Denver/Boulder, CO	48	387	48514	48248	44820 - 51888
North Haven, CT	10	20	48036	46800	38884 - 57880
Quad Cities Area/IA & IL	13	70	48792	42006	34524 - 48600
Aurora, IL	12	19	43482	45638	
Chicago, IL	30	60	48725	46198	38655 - 50818
Northern Chicago Suburbs	32	82	44064	43180	40000 - 47000
Peoria, IL	14	50	42816		38916 - 48720
Rockford, IL	12	42	39408		34800 - 44724
Grand Rapids, MI	29	40	44581		37215 - 56798
Mid Michigan	11	28	37808	38899	30829 - 42400
Southeast Michigan	49	302	51701	43049	40350 - 50062
West Shore Michigan	11	21	48502	43389	39418 - 53160
State of Minnesota	77	327	51048	50798	48356 - 56004
Rochester, NY	35	229	44365	41659	34100 - 44950
Syracuse/Utica, NY	13	26	43740	48300	33730 - 51445
Piedmont Triad, NC	33	137	50832	47281	43000 - 53664
Raleigh/Durham, NC	31	90	58586	55118	51444 - 60824

**Programmer Analyst**

City Name	# of Org	# of Emp.	Wtd Avg.	Median	Mid 50% Range
Cincinnati, OH	23	56	47310	46134	41153 - 51584
Cleveland, OH	44	99	54648	54420	48684 - 60396
Columbus, OH	9	16	42759	42931	32209 - 58867
Toledo, OH	16	34	44149	41650	33938 - 48838
Willamette Valley, OR	36	82	42278	40813	37407 - 48035
Portland Metro, OR	22	45	46701	47351	41118 - 49129
State of Oregon	66	139	43567	44944	37764 - 48718
Philadelphia, PA	14	19	56160	50232	45708 - 58084
Pittsburgh, PA	10	36	41810	41600	36864 - 48885
Reading, PA	9	23	44943	42400	35864 - 47500
Milwaukee, WI	9	134	46634	46494	40891 - 48420



## PTS/OPTS - MOPS Cost Breakdown

From November 1998 - June 1999

Activity Date	Type	Task Name	Resource	Hours	Hourly Rate	Total Task Cost
11/8/98		PTSA/MOPS/QSI Merge Point Review	Jerry J Gassie	8	\$140.00	\$1,120.00
12/29/98	E	Import test AS400 data	Jerry J Gassie	11	\$140.00	\$1,540.00
1/5/99		Specifications Meetings	Jerry J Gassie	2	\$140.00	\$280.00
1/6/99		Specifications Meetings	Jerry J Gassie	3	\$140.00	\$420.00
1/7/99		Specifications Meetings	Jerry J Gassie	5	\$140.00	\$700.00
1/8/99		Specifications Meetings	Jerry J Gassie	2	\$140.00	\$280.00
1/11/99		Prototype development	Jerry J Gassie	4.5	\$140.00	\$630.00
1/12/99	E	PTSA/MOPS/QSI changes & testing	Jerry J Gassie	4	\$140.00	\$560.00
1/13/99	E	Form changes / Testing	Jerry J Gassie	4	\$140.00	\$560.00
1/13/99	E	Research Integration Issues	Jerry J Gassie	8	\$140.00	\$1,120.00
1/14/99	E	QSI Integration / Testing	Jerry J Gassie	8	\$140.00	\$1,120.00
1/16/99	E	Set PTS / MOPS document milestones	Jerry J Gassie	54	\$140.00	\$7,560.00
1/18/99	R	Mops Changes	Jerry J Gassie	4.5	\$140.00	\$630.00
1/20/99	R	PTSA/Mops Changes	Jerry J Gassie	1.5	\$140.00	\$210.00
1/21/99	R	Mops Changes	Jerry J Gassie	9	\$140.00	\$1,260.00
1/22/99	E	Testing - MOPS/PTS/QSI	Jerry J Gassie	14	\$140.00	\$1,960.00
1/28/99		Custom Mgmt DB usage to MOPS/QSI	Surya Sekhar	8	\$120.00	\$960.00
1/29/99		Consulting T&M	Surya Sekhar	2	\$120.00	\$240.00
2/1/99	R	Changes / Testing PTSA/MOPS form	Jerry J Gassie	2	\$140.00	\$280.00
2/11/99		Functional Specification Definition	Jerry J Gassie	1.5	\$140.00	\$210.00
2/11/99	R	Update Tracker	Jenny Doing	10	\$120.00	\$1,200.00
2/12/99	E	Enhancements from 2/11/99	Jerry J Gassie	10	\$140.00	\$1,400.00
2/12/99	R	Additional Forms, OD formula .etc.	Jenny Doing	10	\$120.00	\$1,200.00
2/16/99	R	Exchange Rate Profile	Jenny Doing	8	\$120.00	\$960.00
2/17/99	R	Exchange Rate Profile	Jenny Doing	8	\$120.00	\$960.00
2/22/99	E	View / Exchange rate	Jerry J Gassie	8	\$140.00	\$1,120.00
2/23/99	R	Update Tracker	Jenny Doing	8	\$120.00	\$960.00
2/24/99	R	Navigators	Jenny Doing	8	\$120.00	\$960.00
2/25/99	R	TEE Feedback	Jenny Doing	12	\$120.00	\$1,440.00
2/26/99	R	TEE Feedback	Jenny Doing	8	\$120.00	\$960.00
2/28/99	E	Consulting T&M	Jerry J Gassie	7	\$140.00	\$980.00
3/1/99	E	Need Help forms, views, testing	Dinesh Sapre	8	\$120.00	\$960.00
3/1/99	R	Consulting T&M	Jerry J Gassie	8	\$140.00	\$1,120.00
3/1/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/1/99	E	Views / Figures - Budget	Mark Gottschling	9	\$120.00	\$1,080.00
3/2/99	E	Need Help forms, views, testing	Dinesh Sapre	8	\$120.00	\$960.00
3/2/99	R	Consulting T&M	Jerry J Gassie	8	\$140.00	\$1,120.00
3/2/99	R	TEE Feedback	Jenny Doing	10	\$120.00	\$1,200.00
3/2/99	E	Monthly plan dialog, LS 'net plan	Mark Gottschling	8	\$120.00	\$960.00
3/2/99	R	Miscellaneous Revisions	Adam Majors	10	\$100.00	\$1,000.00
3/3/99	R	Consulting T&M	Jerry J Gassie	5	\$140.00	\$700.00
3/3/99	E	LS 'net plan', test, debug	Mark Gottschling	8	\$120.00	\$960.00
3/3/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/4/99	R	Consulting T&M	Jerry J Gassie	8	\$140.00	\$1,120.00
3/4/99	E	Picklist, currency prompt	Mark Gottschling	8	\$120.00	\$960.00
3/5/99	R	Price Fields, figures table	Dinesh Sapre	9	\$120.00	\$1,080.00
3/5/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/5/99	R	Consulting T&M	Jerry J Gassie	8	\$140.00	\$1,120.00
3/5/99	E	Picklist, currency prompt	Mark Gottschling	6.5	\$120.00	\$780.00
3/8/99	R	Miscellaneous Revisions	Adam Majors	10	\$100.00	\$1,000.00
3/8/99	R	Hide when, figures, plan progress	Dinesh Sapre	6	\$120.00	\$720.00
3/8/99	E	Consulting T&M	Jerry J Gassie	4	\$140.00	\$560.00
3/8/99	E	Currency, Navigators	Mark Gottschling	8	\$120.00	\$960.00
3/8/99	R	Consulting T&M	Jerry J Gassie	4	\$140.00	\$560.00
3/8/99		Budget info, testing	Mark Gottschling	8	\$120.00	\$960.00
3/10/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/11/99	R	Miscellaneous Revisions	Adam Majors	10	\$100.00	\$1,000.00
3/12/99	R	Miscellaneous Revisions	Adam Majors	9	\$100.00	\$900.00

3/17/99	R	Initial Set up Dialog Box	Dinesh Sapre	2	\$120.00	\$240.00
3/17/99	R	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/17/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
3/18/99	R	Initial Set up Dialog Box	Dinesh Sapre	8	\$120.00	\$960.00
3/18/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/18/99	R	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/18/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
3/19/99	R	Currency type at create	Dinesh Sapre	8	\$120.00	\$960.00
3/19/99	E	Consulting T&M	Jerry J Gassie	1	\$140.00	\$140.00
3/19/99	E	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/19/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
3/22/99	R	Initial Set up Dialog Box	Dinesh Sapre	10	\$120.00	\$1,200.00
3/22/99	R	Consulting T&M	Jerry J Gassie	5	\$140.00	\$700.00
3/22/99	R	Tracker Form Changes per EU	Surya Sekhar	10.5	\$120.00	\$1,260.00
3/22/99	R	Navigators	Adam Majors	10.5	\$100.00	\$1,050.00
3/23/99	R	Plan Progress Dialog box	Dinesh Sapre	9.5	\$120.00	\$1,140.00
3/23/99	E	PTS Migration	Elizabeth C Craig	10.5	\$140.00	\$1,470.00
3/23/99	R	Navigators	Adam Majors	8	\$100.00	\$800.00
3/23/99	R	Consulting T&M	Jerry J Gassie	8	\$140.00	\$1,120.00
3/23/99		Convert PTS	Surya Sekhar	9	\$120.00	\$1,080.00
3/24/99	R	Plan Progress move to other options	Dinesh Sapre	9.5	\$120.00	\$1,140.00
3/24/99	R	Tracker Form Modifications	Elizabeth C Craig	8	\$140.00	\$1,120.00
3/24/99		Consulting T&M	Jerry J Gassie	9.5	\$140.00	\$1,330.00
3/24/99		Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/24/99	R	Navigators	Adam Majors	8	\$100.00	\$800.00
3/24/99		Consulting T&M	Surya Sekhar	8.5	\$120.00	\$1,020.00
3/25/99	R	Recalc Initial, exchange rate calcs	Dinesh Sapre	8	\$120.00	\$960.00
3/25/99	E	PTS Migration	Elizabeth C Craig	8	\$140.00	\$1,120.00
3/25/99		Consulting T&M	Jerry J Gassie	5.5	\$140.00	\$770.00
3/25/99		Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/25/99	R	Navigators	Adam Majors	8	\$100.00	\$800.00
3/25/99		Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
3/26/99	R	History dialog, progress views	Dinesh Sapre	8	\$120.00	\$960.00
3/26/99	R	Testing - MOPS	Elizabeth C Craig	8	\$140.00	\$1,120.00
3/26/99		Consulting T&M	Jerry J Gassie	3	\$140.00	\$420.00
3/26/99		Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/26/99	R	Navigators	Adam Majors	8	\$100.00	\$800.00
3/26/99		Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
3/29/99	R	Edit history Proj comm subform	Dinesh Sapre	2	\$120.00	\$240.00
3/29/99	E	Data Validation	Elizabeth C Craig	9	\$140.00	\$1,260.00
3/29/99	R	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/29/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
3/30/99	E	Filermaker migration	Dinesh Sapre	9	\$120.00	\$1,080.00
3/30/99	E	Data Validation	Elizabeth C Craig	9	\$140.00	\$1,260.00
3/30/99	R	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/30/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/30/99	E	Growth Rate Calc in view per SM	Surya Sekhar	8	\$120.00	\$960.00
3/31/99	E	Testing - MOPS	Dinesh Sapre	8	\$120.00	\$960.00
3/31/99	E	Data Validation / PTS Modification	Elizabeth C Craig	8.5	\$140.00	\$1,180.00
3/31/99	R	Miscellaneous Revisions	Adam Majors	8	\$100.00	\$800.00
3/31/99	R	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
3/31/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
4/1/99	R	Filermaker migration	Dinesh Sapre	11	\$120.00	\$1,320.00
4/1/99	R	Fm Migration updates per Yama	Elizabeth C Craig	9.5	\$140.00	\$1,330.00
4/1/99	R	Consulting T&M	Mark Gottschling	8	\$120.00	\$960.00
4/1/99	R	Change db name on all forms & labels	Surya Sekhar	8	\$120.00	\$960.00
4/1/99	R	Miscellaneous Revisions	Adam Majors	10	\$100.00	\$1,000.00
4/5/99	R	Convert initial setup calcs	Dinesh Sapre	3	\$120.00	\$360.00
4/5/99	R	Consulting T&M	Jerry J Gassie	2	\$140.00	\$280.00
4/5/99	R	Consulting T&M	Surya Sekhar	10	\$120.00	\$1,200.00
4/6/99	R	Consulting T&M	Jerry J Gassie	4	\$140.00	\$560.00
4/6/99	R	Consulting T&M	Surya Sekhar	9	\$120.00	\$1,080.00

4/7/99	R	Field and Set code per JP	Surya Sekhar	8	\$120.00	\$960.00
4/8/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
4/9/99	R	Modify MOPS numbering	Dinesh Sapre	1.5	\$120.00	\$180.00
4/9/99	R	Convert List contents per JP and EU	Surya Sekhar	8	\$120.00	\$960.00
4/12/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
4/13/99	R	Consulting T&M	Surya Sekhar	8	\$120.00	\$960.00
4/14/99	R	Major cust field, labels on subforms	Dinesh Sapre	9	\$120.00	\$1,080.00
4/16/99	E	TCA CP summary views	Dinesh Sapre	8	\$120.00	\$960.00
4/19/99	E	Export to Excel	Dinesh Sapre	7	\$120.00	\$840.00
4/20/99	E	TCA CP summary views	Dinesh Sapre	8	\$120.00	\$960.00
4/21/99	R	Modify Lock/Unlock, Export to Excel	Dinesh Sapre	9	\$120.00	\$1,080.00
4/22/99	R	Modify Lock/Unlock, Export to Excel	Dinesh Sapre	8	\$120.00	\$960.00
4/23/99	E	Admin Role, RM District Summary	Dinesh Sapre	8	\$120.00	\$960.00
4/23/99		Mops Documentation	Jason A Wenig	8	\$100.00	\$800.00
4/26/99	E	TCA CP summary views	Dinesh Sapre	8	\$120.00	\$960.00
4/26/99	R	RM Ability to change rank, mod views	Elizabeth C Craig	9	\$140.00	\$1,260.00
4/28/99		Mops Documentation	Jason A Wenig	8	\$100.00	\$800.00
4/27/99	E	TCA CP summary views	Dinesh Sapre	8	\$120.00	\$960.00
4/27/99	E	CP Views	Elizabeth C Craig	10.5	\$140.00	\$1,470.00
4/27/99		Mops Documentation/changes	Jason A Wenig	8	\$100.00	\$800.00
4/28/99	E	TCA CP summary views	Dinesh Sapre	7	\$120.00	\$840.00
4/28/99	R	Consulting T&M	Elizabeth C Craig	11	\$140.00	\$1,540.00
4/28/99		Mops Documentation/changes	Jason A Wenig	8	\$100.00	\$800.00
4/29/99	R	Consulting T&M	Elizabeth C Craig	9	\$140.00	\$1,260.00
4/29/99		Mops Documentation/Changes	Jason A Wenig	8	\$100.00	\$800.00
4/30/99	E	District Summary	Dinesh Sapre	8	\$120.00	\$960.00
4/30/99	R	Consulting T&M	Elizabeth C Craig	8	\$140.00	\$1,120.00
4/30/99	R	Mops Conversion	Jason A Wenig	8	\$100.00	\$800.00
4/3/99	R	Consulting T&M	Jason A Wenig	2	\$100.00	\$200.00
4/3/99	R	Consulting T&M	Sally Staigerwald	8	\$120.00	\$960.00
4/4/99	R	Consulting T&M	Jason A Wenig	2	\$100.00	\$200.00
4/4/99	R	Consulting T&M	Sally Staigerwald	8	\$120.00	\$960.00
4/5/99	R	Consulting T&M	Jason A Wenig	1	\$100.00	\$100.00
4/5/99	R	Consulting T&M	Sally Staigerwald	8	\$120.00	\$960.00
4/7/99	R	Consulting T&M	Jason A Wenig	2	\$100.00	\$200.00
4/10/99	R	Consulting T&M	Jason A Wenig	8	\$100.00	\$800.00
4/11/99	R	Consulting T&M	Jason A Wenig	1	\$100.00	\$100.00
4/11/99	R	Consulting T&M	Sally Staigerwald	8	\$120.00	\$960.00
4/13/99	R	Chase down and fix font problem	Jason A Wenig	3	\$100.00	\$300.00
4/13/99	R	Chase down and fix font problem	Elizabeth C Craig	3	\$140.00	\$420.00
4/14/99	R	Filemaker migration	Jason A Wenig	8	\$100.00	\$800.00
4/14/99	R	Filemaker migration	Sally Staigerwald	8	\$120.00	\$960.00
4/15/99	R	Filemaker -Reimport plan comment	Jason A Wenig	3	\$100.00	\$300.00
4/15/99	R	Filemaker -Reimport plan comment	Sally Staigerwald	4	\$120.00	\$480.00
4/17/99	R	Filemaker -Reimport background	Jason A Wenig	4	\$100.00	\$400.00
4/17/99	R	Filemaker -Reimport background	Sally Staigerwald	4	\$120.00	\$480.00
4/18/99	R	RM S-Mgrs views	Jason A Wenig	1	\$100.00	\$100.00
4/21/99	R	Filemaker migration figures table	Jason A Wenig	8	\$100.00	\$800.00
4/24/99	R	Filemaker migration figures table	Jason A Wenig	10	\$100.00	\$1,000.00
4/4/99	R	Consulting T&M	Jason A Wenig	8	\$100.00	\$800.00
4/9/99	R	Consulting T&M	Jason A Wenig	4	\$100.00	\$400.00
4/11/99	R	FM Migration updates per Lars	Jason A Wenig	8	\$100.00	\$800.00
4/14/99	R	FM Migration w/ new data per Lars	Jason A Wenig	8	\$100.00	\$800.00
4/15/99	R	FM Migration w/ new data per Lars	Jason A Wenig	8	\$100.00	\$800.00
4/16/99	R	FM Migration calculation problem fix	Jason A Wenig	8	\$100.00	\$800.00
4/17/99	E	Miscellaneous MOPS Enhancements	Jason A Wenig	8	\$100.00	\$800.00
4/21/99	E	Miscellaneous MOPS Enhancements	Jason A Wenig	8	\$100.00	\$800.00
4/21/99	E	Miscellaneous MOPS Enhancements	Curtis Cutler	8	\$120.00	\$960.00

Note: Estimated Cost Of Revisions (Type = R): \$93,920.00

Estimated MOPS Cost To Date:

\$161,230.00

2007年 1月30日 10時52分

TSUGIMURA PATENT INT.

Example: 【お願い】 US出願02002745, P.P. 3  
件名 件

毎度お世話様です。

昨日はわざわざ本社までご足労頂きまして、誠に有難うございました。

Evidence - [A]

実際に特許出願に向けての具体的な7ヶ月の経緯は調査中ですが、別途TEEサイトでも色々調べてもらって  
り、下記メールが出て来られた(ワケナカ)。

Kanako Horijo/D\_DUS/TDK\_EU\_Parts@TDK\_EU\_PARTS

Kanako  
Horijo/D\_DUS/TDK\_EU\_Parts  
@TDK\_EU\_PARTS

2007/01/12 02:00

宛先 Yasuaki Fukuda/TDK~JP@TDK~JP

cc Seiji Tomonaga/TDK~JP@TDK~JP

件名 For Thesis (特許の件)

お付こうメールを古澤さんと一緒に今確認しました。前に送ったやつ(Version18)よりさらに、Versionが若い分、  
メールの日付も2000年3月2日ですらに早くなりました。  
どうですか?

送付のVersion8&10だと、P2の下記のセンテンスです。

Since this MMM System is going to be applied for the patent as a new business model,  
methodological part by the utilization of computer is limited to introduce to the outline of the  
system.

どうか役に立ちますように....  
本庄

////////////////////////////////////  
[Stamp] Shiro Yoko  
2000/03/02 15:31

To: Yasuaki Fukuda/D\_DUS/TDK\_EU\_Parts@TDK\_EU\_Parts

Subject: Thesis

Please add and make as rev 8 then, send back to ms. Thesis Rev 8. doc

Forwarded by Takahiro Kokai/D\_DUS/TDK\_EU\_Parts on 2007/01/11 17:35

[Stamp] Shiro Yoko  
2000/03/02 12:11

Starting 1~4 pages  
printed and attached.  
(Evidence B)

To: yfuchs@aol.com

cc: Michaela Hansper/D\_DUS/TDK\_EU\_Parts@TDK\_EU\_Parts, Yasuaki  
Fukuda/D\_DUS/TDK\_EU\_Parts@TDK\_EU\_Parts, Kanako Horijo/D\_DUS/TDK\_EU\_Parts@TDK\_EU\_Parts

Subject: Thesis rev 10

I have added something more in green color. Rev 9 was in blue color.

Michaela, Mrs Horijo has revised the title of evaluation sheets which are on your part of Appendix.

Thesis Rev 10: doc

Barbara san, hope you enjoy carnival tonight.  
Thanks

2007年 1月28日 17時46分  
最終的に本文に添っている(本文P4、日本語P4)内容ですが、補覚席及び関連メンバーとの加筆・修正に關

22007年 1月30日 10時52分

TSUGIMURA PATENT INT.

M.N.O. 2745 P.P. 4

Evidence-B

## MULTI-DIMENSIONAL MATRIX MANAGEMENT SYSTEM

DRAFT

By  
Shinji Yoko

Approved :

Date:

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## 1. Background of this thesis

This thesis is based on my experience of working at TDK Corporation for 30 years, of which 7 years were spent in Japan, 13 years in the United States and 10 years in Europe. I have created the Global Cross-Border Management System for the Sales and Marketing function of TDK in last 15 years. With the development of computer information technology, I have established the on line, on time management system in Europe, a continent of diverse features, such as country, language, culture, currency and law etc. We named this Cross-Border Management System as "Multi-dimensional Matrix Management System = MMM System".

We were very successful in our business with the implementation of MMM system in our European division. I was appointed a member of the Board of TDK Corporation in Japan in 1998 and have now been requested to implement this successful MMM system worldwide, both horizontally and vertically to include the engineering and production divisions. Since this MMM System is going to be applied for the patent as a new business model, methodological part by the utilization of computer is limited to introduce to the outline of the system.

- Based on the experience of the Electronic Components' Business of TDK Corporation. Started from American market and then to the European and Global markets.
- The theory in this thesis was found through a real story of how TDK could expand business by crossing borders, crossing functions, and adding wisdom from trial and error.
- Focused to the area of Sales and Marketing world wide(Horizontal Integration) and going to expand (Vertical Integration) to link to the manufacturing and engineering to cover the complete supply chain.
- How we have coped with the changes of the market requirement by setting up the strategies, objectives and tactics to be a competitive company world wide.
- Information Technology has really enabled us to manage the objectives multi-dimensionally and multi/cross functionally. The historical approach is introduced such as copying papers when the computer was not available, sorting objectives through products/territory/application sets/customers to the semi-automatic computer control by File Maker software and to the full automatic on line, one time control by Lotus Notes.

This thesis is to explain how the evolution of IT made it possible for TDK to manage our global operation multi-dimensionally and how important it was for the human management to achieve our mutual objectives. Our theory of MMM System can be applied to the transnational management for the many other global companies.

Matrix management system is seen in some global companies but they make the matrix with Products and Territories. Our MMM System is in 4 axis matrix of Product, Territory, Set(Application) and Account(Customer) which is quite unique.

Matrix Management System is seen in some global companies but they make the matrix with product & territories. Our MMM System is in a Matrix of Products/Territory/Set(Application)/Account.

Since this thesis is based on our management system being created originally in TDK, I have used a lot of wordings which are only unique to our company. The explanation of

those wordings is also included in the attached appendix.

## 2. Essence of this thesis

*The key to the success for the multinational company who is operating globally with cross-boarder, cross-culture and cross-function is to establish the management system which enables to manage the company multi-dimensionally of its matrix functions with the full utilization of IT (Information technology) and human management based on the strong leadership to pursue its objectives relentlessly throughout the global matrix organization.*

### - Objectives

Objectives must be set up globally in matrix with multiple axes which are essential elements to pursue its objectives. Objectives must be shared with mutual consensus and finalized relentlessly.

### - Dry Information

Information must be delivered and accessed on time by Anybody, Anytime, Anywhere. The speed is the key to the success.

### - Maximize the Utilization of IT

In order to systemize the objectives in multiple axes and sharing the information on time with Anybody, Anytime, Anywhere base, the utilization of Information Technology is essential.

Standardization of software and language is most important to systemize the operation by IT globally. Utilization rule of IT also has to be standardized and ruled out globally.

This is same as for the traffic control system and we need the police function too to make the smooth flow of the information.

*Software* with full of wisdom has to be developed.

### - Human management

The key to the success for the matrix management system is the Strong Leadership and human communications. *Heartware* establishment over hardware/software is essential. The information has to be delivered quickly on time to anybody, at Anytime, to/from anywhere but its value will be realized when we make the human communication with *wet sense* (*Wet Communication*).

### - Value formula of MMM System (*Multi-dimensional Matrix Management System*)

The management system which enables above activity is named Multi-dimensional Matrix Management System which is explained in this thesis.

$$\text{Value of MMM} = \alpha \times \frac{\text{Information Quality}}{\text{Time} \times \text{Distance} \times \text{Information Volume}}$$

In value formula for the global operation, time to access to the information and other party, and physical distance between the communicating party would be the denominator and inverse proportion.

Information Volume is also denominator because the volume of information means nothing but disturbing the real situation and delaying to come up to the conclusive idea. What is the key important factor is the quality of the information which would push to the people to take an action immediately.

$\alpha$  means *Human Communication* which we call *Wet Communication with Heartware*. Heartware is our created word beyond the software and hardware.

This is the area for the emotional heart of human beings which computers and IT can not solve.

Human beings input the information into the computers but each individual's sense of value and judgement of its value is different, which may create the big gap between the peoples who share the information. *Value of the information is realized when it is communicated by the human beings biologically not by computers.*

### 3. Outline of MMM System

#### 3.1 The key to the success of MMM System is evolution of IT & Leadership

The Information Technology and Human Management by the strong and persistent leadership to pursue each 4 axis objectives are the key to the success of this system.

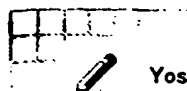
Refer to Figure 1

MMM Systems is based on the MOPS which is major objective progress system circled in yellow color in the chart 1. Major objectives are to be set at the beginning of new fiscal term and reviewed semiannually. Four circles colored in violet are the computer controlled systems to support the management decision. This computerized information on line system contains almost all necessary information for the operation and also being evaluated its performance as a score which is similar to the ABACUS system of ABB and Balanced Score Card of Harvard.



To: Ms. Mary Jane Boswell

MJB  
PATSU



Yoshikazu Fujiwara  
2000/05/17 19:07

24607-5002

To: mjboswell@mlb.com, jihewitt@mlb.com  
cc: Jeffrey Williams/TUC/TKD-US@TKD-US, Richard Meher/Mount Prospect/TCA/TKD-US@TKD-US

Subject: Business model patent application (MMM system)

Dear Ms. Mary Jane Boswell:

This is Yoshikazu Fujiwara of TDK U.S.A. Corporation.

1: I would like to send you a thesis of this case in "Word file" attached below.  
(Please note that this file should be opened by Japanese Word.  
When opened by English Word, the layout is corrupted.)  
I also send you a printed document in separate mail.

2: As we discussed today, Mr. Yoko, the author of this thesis and one inventor, will read a paper in public in the first week of June (maybe June 5 or 6), therefore we have to file this patent application before the date.  
Because we do not have enough time to prepare a specification of this case, I assume we should file this case firstly by "provisional application", after that, we should revise it to a regular utility patent application.

3: This management system has been used in some TDK group companies and it has been worked very well.  
Of course, the use of this system has been limited in internal of TDK group.

4: This case is a kind of "business model patent", in general this thesis explains management system using computer network, especially focusing on 4 axes, (1) "Customer" (in this thesis it is called as "Accounts"), (2) "Products", (3) "Territories" and (4) "Sets" (application, i.e. products of our customer).  
They are used for a decision making, a progress control, evaluation and assessment of employee's performance, etc.  
This thesis includes many features in view of management but it seems to be vague in view of patentable feature.  
I assume an analysis of this technology (to clarify its patentable features) is necessary for preparing regular specification.  
However I am a patent attorney registered in Japan, I have not so familiar with "business model patent", so far.  
I would like to ask to clarify invention and prepare specification of this case.

5: As Jeff talked you, this thesis includes many third party (Customer company) names and also real human names in thesis and especially appendices.

Mr. Yoko believed there were no problematic contents regarding third party's name, however, I suppose it is necessary to change these real names to some symbol names, (e.g. Company A).  
I sent you thesis files "as is" and I did not change anything, so far.

6: Program code

I do not have program code of this system, but I assume Mr. Jason Ian Hewitt has them, if necessary.

7: Flow chart (diagram) of the program

I do not have any information regarding the flow chart and diagram, so far.  
I will ask someone whether TDK has these or not.

8: Applicant is "TDK Corporation"  
(Our parent company in Japan)

9: Inventors:

Inventors are 2 (two) person as follows.

(1) Shinji Yoko

(2) Michihiro Tame

now they live in Germany and I will confirm their address.

I have to leave for Europe from this Sunday and I come back to my office May 29 (Mon).  
Therefore, I could not handle this case during my business trip and also the deadline is closing.  
Could you please put forward a necessary preparation for this case in the meantime.

If you have any question, please contact me by e-mail.

With best regards,

Yoshi

I: Table

RECEIVED

MAY 22 2000

MORGAN, LEWIS & BOCKIUS LLP

ACKNOWLEDGEMENT  
MORGAN, LEWIS & BOCKIUS LLP  
RECEIPT ACKNOWLEDGEMENT

BY:  DATE: 

Yoshikazu Fujiwara

DOCKETED

By SB Date 5-22-00



...v3j0æφ~} :

2: Final thesis



...8ç#jæv.φ ç ~} :

3: 1-ABCDEF



\*abdefg~ æ

4: 2-12



\*~ æ

05/17/2000	MARY BOSWELL	Telephone conference with J. Williams, Y.	024607-5002
06/30/2000	Invoice=334371	Fujiwara and J. Hewitt to discuss patent strategy and possible bar dates.	
05/18/2000	MARY BOSWELL	Receive and begin review of invention	024607-5002
06/30/2000	Invoice=334371	disclosure.	
05/19/2000	MARY BOSWELL	Review documents received from Mr. Yoshitagu.	024607-5002
06/30/2000	Invoice=334371		
05/22/2000	MARY BOSWELL	Review e-mail information from Y. Fujiwara to	024607-5002
06/30/2000	Invoice=334371	begin provisional application.	
05/23/2000	MARY BOSWELL	Review thesis and begin preparing provisional	024607-5002
06/30/2000	Invoice=334371	application.	
05/29/2000	MARY BOSWELL	Review thesis and prepare provisional	024607-5002
06/30/2000	Invoice=334371	application.	
05/30/2000	MARY BOSWELL	Prepare provisional application.	024607-5002
06/30/2000	Invoice=334371		
05/31/2000	MARY BOSWELL	Prepare provisional application.	024607-5002
06/30/2000	Invoice=334371		
	BILLED TOTALS: WORK:	8 records	
	BILLED TOTALS: BILL:		
	GRAND TOTALS: WORK:	8 records	
	GRAND TOTALS: BILL:		

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